

REMARKS

Applicants submit this Amendment and Response to address the Office Action mailed on February 19, 2009. Claims 19, 20, 23, 25, 36, 37, 40, 42, 53, 56, and 58 have been amended without intending to abandon or to dedicate to the public any patentable subject matter. Accordingly, claims 19-68 are currently pending in the application.

(I) Drawing Objections

The drawings have been objected under 37 CFR 1.83(a) for failing to show every feature of the invention specified in the claims. The housing feature has been canceled from the claims. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to the drawings.

(II) Claim Objections

Claims 19, 20, 23, 40, 53, and 56 have been objected to because they contained various informalities. Claims 19 and 23 were objected to for containing the phrase “the lock cores or knob shafts” and the Examiner suggested to amend this language to read “the lock core and the knob shaft.” Applicants respectfully disagree with this proposed amendment as the claim recites two opposite cylindrical receptacles *at least one of* which comprises *either* a lock core *or* a knob shaft. Accordingly, it would be improper to amend the claim per the Examiner’s suggestion since the claim does not actually recite “at least one lock core and knob shaft.” The other objectionable language has been removed from the claim by these amendments. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to claims 19, 20, 23, 40, 53, and 56.

(III) Claim Rejections under 35 U.S.C. §112

Claims 19-68 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. These claims have been amended to remove the aspects found to be indefinite or will be clarified below.

First, claims 19, 23, 36, 40, 53, and 56 have been rejected because it was apparently “unclear how the lock tab is freely rotateable relative to the lock core or the knob shaft.” Applicants agree with the Examiner’s understanding of this language and submit that the tab is

freely rotateable relative to the lock core or knob shaft when there is no radial linkage between the tab and lock core or the tab and knob shaft. Thus, the lock core or knob shaft is able to rotate three hundred and sixty degrees, or more, without causing a rotation of the tab, or vice versa, when there is no radial linkage between the elements (*i.e.*, when the tab is freely rotateable).

Second, claims 19, 36, and 53 have been rejected because it was apparently “unclear how the driver is moved in a direction relative to the long axis of the knob shaft only.” Claims 19, 36 and 53 have been amended to address these rejections.

Third, claim 23 has been rejected because it was apparently “unclear to which portion of the device the driver is formed.” Claim 23 has been amended to address this rejection.

Fourth, claims 25, 27, 42, 44, 58, and 60 have been rejected because of apparently unclear language regarding the details of the pin, slide, and compression spring. These claims have been amended to clarify the relationship between the pin, slide, sleeve, and compression spring.

Finally, claim 37 was rejected because it was apparently “unclear how the lock core and knob shaft are connected to rotate when the lock cylinder of claim 36 does not necessarily require a lock core and knob shaft.” Claim 36 has been amended to address this rejection. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of claims 19-68.

(IV) Claim Rejections under 35 U.S.C. §102 and §103

Claims 19, 21, 22, 29, 35, 36, 38, 39, 53-55, 62, and 68 stand rejected under 35 U.S.C. §102(b) as being anticipated by EP Patent No. 1 065 335 to Niemann [hereinafter “Niemann”]. In order for a rejection under 35 U.S.C. §102 to be proper, each and every element as set forth in a claim must be found, either expressly or inherently described, in a single prior art reference. (MPEP §2131). However, all of the claim limitations set forth in the pending claims cannot be found in Niemann.

Claim 20 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Niemann in view of WO 02/088492 to Kornhofer et al. [hereinafter “Kornhofer”]. Claims 23, 24, 40, 41, 46, 52, 56, and 57 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kornhofer in view of Niemann. Claims 25-28, 42-45, and 58-61 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Niemann in view of U.S. Patent No. 6,865,916 to Goldman [hereinafter

“Goldman”]. Claims 30-34, 47-51, and 63-67 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Niemann in view of U.S. Patent No. 5,010,750 to Buser et al. [hereinafter “Buser”].

In order for a rejection under 35 U.S.C. §103 to be proper, clear articulation of the reason(s) why the claimed invention would have been obvious should be stated by the Examiner and must be supported by some rationale which may include one of the following: A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) “Obvious to try” - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; or (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. The Supreme Court noted in *KSR v. Teleflex* that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. (MPEP §2143). The Examiner has not, however, identified the rationale which supports the conclusion that the pending claims are unpatentable over Niemann, Kornhofer, Goldman, or Buser. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

Applicants respectfully submit that none of the cited prior art teaches, suggests, or makes obvious several features of the independent claims. More specifically, neither Niemann, Kornhofer, Goldman, nor Buser teach, suggest, or make obvious at least the following italicized features of the independent claims related to the operation of an eccentric:

19. An electromechanical lock cylinder that cooperates with evaluation electronics to recognize access authorization, comprising:

two opposite cylindrical receptacles, at least one of which comprises either a lock core, capable of being operated by a key, or a knob shaft, which is connected to rotate in unison with a knob, wherein the lock core or knob shaft cooperates with a lock tab, which operates, in particular, a bolt or a latch of a door lock, and, with a fitting key or access authorization, an electromechanically driven

blocking or coupling element is moved from a rest position to an operating position and produces a splined connection between the key or knob and the lock tab, *whereas the lock tab, in the rest position of the blocking or coupling element, is freely rotatable relative to the lock core or the knob shaft, wherein the blocking or coupling element is arranged on or in the lock core or on or in the knob shaft and rotates with it, and includes an eccentric that is rotatable between a first and second position such that when the eccentric is in the first position, a driver in communication therewith is in a rest position, and when the eccentric is rotated from the first position to the second position, the driver is moved in a direction substantially perpendicular to a long axis of the knob shaft or lock core into an operating position, in which the driver engages in a recess of the lock tab or a rotary sleeve, on which the lock tab is arranged.*

23. An electromechanical lock cylinder that cooperates with evaluation electronics to recognize access authorization, comprising:

two opposite cylindrical receptacles, at least one of which comprises either a lock core, which is capable of being operated by a key, or a knob shaft, which is connected to rotate in unison with a knob, wherein the lock core or knob shaft cooperates with a lock tab, which operates, in particular, a bolt or a latch of a door lock, and, with a fitting key or access authorization, an electromechanically driven blocking or coupling element is moved from a rest position to an operating position and produces a splined connection between the key or knob and the lock tab, *whereas the lock tab, in the rest position of the blocking or coupling element, is freely rotatable relative to the lock core or the knob shaft, wherein the blocking or coupling element is arranged on or in the lock core or on or in the knob shaft and rotates with it, and includes an eccentric, which moves a driver included in the blocking or coupling element back and forth between the rest position and the operating position, in which it engages in a recess of the lock tab or a rotary sleeve, on which the lock tab is arranged, wherein the eccentric has a pin arranged eccentrically around a motor shaft, which engages in a groove extending across a lift movement of the driver and perpendicular to the motor shaft, whose position and length are dimensioned, so that a rotary movement from the rest position into the operating position is only possible in one direction of rotation, and the rotational movement from the operating position into the rest position of the driver is only possible in the opposite direction of rotation.*

36. An electromechanical lock cylinder, which cooperates with an evaluation electronics to recognize access authorization, comprising:

two opposite cylindrical receptacles in which at least one of a lock core and/or knob shaft operatively associated with the cylindrical receptacles cooperate with a lock tab, and especially operate a bolt or latch of a door lock, and with a fitting key and/or access authorization, an electromechanically driven blocking or coupling element is moved from a rest position to an operating position and produces a splined connection between the key and/or knob and the lock tab, *whereas the lock tab, in the rest position of the blocking or coupling element, is*

freely rotatable relative to the lock core and the knob shaft, wherein the blocking or coupling element is arranged on or in the lock core or on or in the knob shaft and rotates with it, and also includes an eccentric that is rotatable between a first and second position such that when the eccentric is in the first position, a driver in communication therewith is in a rest position, and when the eccentric is rotated from the first position to the second position, the driver is moved in a direction substantially perpendicular to a long axis of the knob shaft into an operating position, in which the driver engages in a recess of the lock tab or a rotary sleeve, on which the lock tab is arranged.

40. An electromechanical lock cylinder, which cooperates with an evaluation electronics to recognize access authorization, comprising:

two opposite cylindrical receptacles, in which, on one side of the housing, a lock core, which is capable of being operated by a key, and, on the opposite side, a knob shaft, which is connected to rotate in unison with a knob, are mounted to rotate, in which the lock core and/or knob shaft cooperate with a lock tab, and especially operate a bolt or latch of a door lock, and with a fitting key and/or access authorization, an electromechanically driven blocking or coupling element is moved from a rest position to an operating position and produces a splined connection between the key and/or knob and the lock tab, *whereas the lock tab, in the rest position of the blocking or coupling element, is freely rotatable relative to the lock core and the knob shaft, wherein the blocking or coupling element is arranged on or in the lock core or on or in the knob shaft and rotates with it, and also includes an eccentric, which moves a driver back and forth between the rest position and the operating position, in which it engages in a recess of the lock tab or a rotary sleeve, on which the lock tab is arranged, wherein the eccentric has a pin arranged eccentrically around a motor shaft, which engages in a groove extending across the lift movement of the driver and perpendicular to the motor shaft, whose position and length are dimensioned, so that a rotary movement from the rest position into the operating position is only possible in one direction of rotation, and the rotational movement from the operating position into the rest position of the driver is only possible in the opposite direction of rotation.*

53. An electromechanical lock cylinder, which cooperates with evaluation electronics to recognize an access authorization, comprising:

a cylindrical receptacle, in which either a lock core, which is capable of being operated by a key, or a knob shaft, which is connected to rotate in unison with a knob, is mounted to rotate, in which the lock core or the knob shaft cooperate with a lock tab, which operates, in particular, a bolt or latch of a door lock, and, with a fitting key and/or access authorization, electromechanically driven blocking or coupling element is moved from a rest position to an operating position and produces a splined connection between the key or knob and the lock tab, *whereas the lock tab, in the rest position of the blocking or coupling element, is freely rotatable relative to the lock core or to the knob shaft, wherein the*

blocking or coupling element is arranged on or in the lock core or on or in the knob shaft and rotates with it, and also includes an eccentric that is rotatable between a first and second position such that when the eccentric is in the first position, a driver in communication therewith is in a rest position, and when the eccentric is rotated from the first position to the second position, the driver is moved in a direction substantially perpendicular to a long axis of the knob shaft into an operating position, in which the driver engages in a recess of the lock tab or a rotary sleeve, on which the lock tab is arranged.

56. An electromechanical lock cylinder, which cooperates with evaluation electronics to recognize an access authorization, comprising:

a cylindrical receptacle, in which either a lock core, which is capable of being operated by a key, or a knob shaft, which is connected to rotate in unison with a knob, is mounted to rotate, in which the lock core or the knob shaft cooperate with a lock tab, which operates, in particular, a bolt or latch of a door lock, and, with a fitting key and/or access authorization, electromechanically driven blocking or coupling element is moved from a rest position to an operating position and produces a splined connection between the key or knob and the lock tab, *whereas the lock tab, in the rest position of the blocking or coupling element, is freely rotatable relative to the lock core or to the knob shaft, wherein the blocking or coupling element is arranged on or in the lock core or on or in the knob shaft and rotates with it, and also includes an eccentric, which moves a driver back and forth between the rest position and the operating position, in which it engages in a recess of the lock tab or a rotary sleeve, on which the lock tab is arranged, wherein the eccentric has a pin arranged eccentrically around a motor shaft, which engages in a groove extending across the lift movement of the driver and perpendicular to the motor shaft, whose position and length are dimensioned, so that a rotary movement from the rest position into the operating position is only possible in one direction of rotation, and the rotational movement from the operating position into the rest position of the driver is only possible in the opposite direction of rotation.*

Niemann

Niemann is generally directed toward a lock cylinder with a cylinder core and an electromechanical “Gesperre” which is retractable from and insertable to the cylinder core. Applicants respectfully disagree with the Examiner’s assertion that Niemann discloses an eccentric as claimed. In fact, Niemann does not appear to disclose any eccentric of any kind. The coupling element (26) of Niemann is not an eccentric as claimed. Rather, the coupling pin (26) moves axially, under action of spring (39), in the direction of arrow (31). *See Niemannn* Fig. 3 and paragraph 33. This is in direct contrast to the claimed eccentric which moves radially. Accordingly, in addition to not teaching an eccentric or an eccentric adapted to move radially,

Niemann explicitly teaches away from such a feature. Accordingly, Niemann appears insufficient to support a rejection under 35 U.S.C. §102 or §103.

Kornhofer

Kornhofer discloses a pin radially activated by a longitudinal rotor via an eccentric. These components, however, are depicted as being located in the lock housing and not within the lock core or knob shaft. The location of these components in Kornhofer exposes them to tampering and other non-desirable activity, whereas the present invention protects such components by providing them within the lock core or knob shaft. Also, the coupling mechanism disclosed by Kornhofer creates a connection between the lock housing and the lock core (or shaft). The lock core is permanently connected to the lock tab. Therefore, the lock core cannot rotate freely within the housing as long as no authorization is given.

Goldman and Buser

As noted above, neither Niemann nor Kornhofer teach, suggest, or make obvious several features of the independent claims. Neither Goldman nor Buser overcome the shortcomings of Niemann and Kornhofer. Accordingly, the rejections of the claims based on a combination of Niemann, Kornhofer, Goldman, and/or Buser should also be reconsidered and withdrawn. More particularly, Goldman describes a locking cylinder which can be operated with an electromagnetic device. There is neither a motor nor an eccentric disclosed in Goldman. The cap 64 (*see* Fig. 3A of Goldman) is not an electromagnetically driven eccentric as stated by the Examiner. The driving means for the cap 64 includes an electromagnetic means and not a motor that turns an eccentric. This particular fact leaves the lock of Goldman susceptible to attacks whereby an attacker introduces an appropriate magnet to the knob of the lock. This may result in the pin being driven into the engaged position without actually presenting an appropriate credential/key.

Additionally, this cap 64 appears to be a plate which can be to-and-from movable in the axial direction of the locking core (*see* column 2, lines 39-43 and Figs. 2 and 3A of Goldman) in order to effect an engaging position of the clutch. Furthermore, the driving means of Goldman are located within the knob and not within or on the locking core or knob shaft respectively. This means that if a proper axial force is applied to the knob (*e.g.*, via a hammer or the like), the

knob may be engaged and illicit access may be granted to a secure area. The present invention, on the other hand, provides that the electromechanical drive for the locking pin are in the lock core or the knob shaft.

Yet another difference is that the lock tab 20 of Goldman is integral to one part of the locking core. It cannot rotate independently of the knob shaft or lock core as claimed in the currently pending independent claims.

It appears as though this particular prior art document is identical and has the same drawbacks of the prior art patent discussed at page 2 of the original specification. Embodiments of the present invention address such drawbacks.

Buser discloses a locking cylinder with an electromagnetic locking mechanism. The driving means are located in the housing of the cylinder and not in the lock core or knob shaft respectively. Further, there is no eccentric provided. Buser is primarily relied upon to show that the use of sensors in locks are known. Buser, however, does not overcome the other shortcomings of the other prior art references in that Buser does not teach, suggest, or make obvious providing an electromechanically driven locking pin that resides on or in the lock core or the knob shaft. Also, Buser does not show that the lock tab can rotate independently of the knob shaft or lock core.

Notwithstanding all of these shortcomings, the Examiner has further failed to show how one skilled in the art would modify the prior art with Buser to teach any of the currently pending claims.

Accordingly, none of the prior art references appear to teach, suggest, or make obvious several features of the independent claims and the dependent claims therefore. Applicants, therefore, respectfully request reconsideration and withdrawal of the rejections of the claims.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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